BROWN
Alpert Medical School

RICHARD P. MILLMAN, M.D.
Vice-Chairman of Medicine for Operations
Professor of Medicine
Division of Biology and Medicine

RE:1704.02–RSA v IMSCO et al

Medical Opinion – Richard P Millman MD

I have been asked to review the trucking accident which resulted in the death of the driver James Ray Crews from a medical perspective to determine whether appropriate safeguards were in place to identify whether this patient had obstructive sleep apnea. The presence of untreated obstructive sleep apnea would have placed him at a greater risk of dozing off or falling asleep at the wheel while driving his tractor trailer. As a result of my review it is my opinion that Mr. Crews had obstructive sleep apnea that was not recognized by either his employer or the examining physician at Concentra Medical Centers who certified him to drive tractor trailers. The patient clearly had many features which should have raised the threshold of the suspicion of both the physician and the company that he had untreated obstructive sleep apnea. These features included morbid obesity, hypertension and diabetes mellitus.

The rationale for my opinion that the driver had sleep apnea is supported by the exhibits that I had the opportunity to review including multiple depositions, the driver's medical records before and after the accident, as well as the medical literature some of which I helped author (see Appendix A). In addition the medical records from his hospitalization at the Arkansas Children's Hospital Burn Center after the accident clearly stated that he had a past history of obstructive sleep apnea that was being treated

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EXHIBIT 1

with weight loss and not positive pressure therapy. Thus we know that he had unrecognized obstructive sleep apnea that was not noted by Dr Lee or his company prior to him being allowed to drive.

When the patient came into Concentra Medical Centers on 4/29/08 he was examined by Dr Nicola Lee for his Medical Examination Report. The patient checked "NO" to the box next to "sleep disorders, pauses in breathing while asleep , daytime sleepiness, loud snoring". This is not a sufficient screening tool for obstructive sleep apnea. It should be noted that the patient was not given the more sensitive Berlin Questionnaire to detect sleep disorders that was available at the center.

Even without this Dr Lee should have suspected sleep apnea because of the patient's massive obesity and thick neck. She should have been well aware that truck drivers frequently have sleep apnea (see articles by Stoohs). Mr. Crews was 71 inches in height and weighed 314 pounds which calculates to a body mass index (BMI) of 43.8 kg/m^2 which by all standards is consistent with morbid obesity. The American College of Chest Physicians, the American College of Occupational and Environmental Medicine and the National Sleep Foundation issued recommendations in 2006 about screening truck drivers with possible or probable sleep apnea (see articles by Hartenbaum). Dr Lee should have known about these recommendations, since she was functioning primarily as an occupational physician at her place of employment. This treatise recommended a sleep evaluation in a truck driver if the applicant met two of the following criteria (1) BMI > 35 kg/m^2 (2) neck size > 17 inches in men or (3) new, uncontrolled or unable to control hypertension with fewer than two medications. The patient clearly met the first two criteria since with this level of morbid obesity he would definitely have had a neck size over 17 inches. Dr Lee failed to measure the patient's neck size, even though she admitted on page 62 of her deposition that was an important item to assess. Furthermore the Expert Panel Recommendations for Obstructive Sleep Apnea and Commercial Driver Safety that came out in early 2008 (Ancoli-Israel et al) recommended that drivers with a BMI of 33 kg/m^2 undergo a sleep study for sleep apnea since obesity is such a significant risk factor for the development of the disease.

Dr Lee also failed to document that he had significant heart disease in the past (See Georgia Clinic medical records). This would have hopefully made a difference in changing her threshold to order a sleep evaluation. In fact on Page 58 of her deposition, when she is questioned about when she would send a patient for sleep testing she responded "if they have, you know, abnormal cardiac exam, they have history of hypertension, if you know, there's something abnormal and they've given a history, abnormal history, then you can send them for testing."

In addition the patient had diabetes mellitus which has been shown to increase the risk of truck crashes (Laberge-Nadeau) independent of whether the driver is taking insulin or not. This is probably related to the high prevalence of obstructive sleep apnea in this population which has recently come to light (Foster). Dr Lee failed to take this into consideration as well when she renewed his commercial license.

IMSCO also had responsibility to establish their own program to make sure their employees would not fall asleep at the wheel. Though their training manual does list the danger signs of fatigue and ways to reduce fatigue, they have nothing stated in their manual about how to identify the high risk individual who may be at greater risk of falling asleep at the wheel (such as those that potentially could have sleep apnea or those with diabetes).

IMSCO and Dr Lee, therefore, did not exercise reasonable care in testing to determine whether it was safe and prudent to have Mr. Crews to be a long distance truck driver. Mr. Crews should not have been allowed to drive without evaluating him for sleep apnea even if he denied symptoms on the check list or not. Identification of sleep apnea in this driver by the Dr Lee or the company would have prompted a sleep study evaluation as well as appropriate treatment. If this had been done he would be potentially alive today.

Richard P Millman, MD
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Vice Chairman and Professor of Medicine
Alpert Medical School of Brown University
Providence, Rhode Island

Enclosures
Appendix A Exhibits
CV
List of Cases – Expert Witness Testimony
Fee schedule

Richard P Millman MD

Appendix A- Exhibits

A Depositions:

Charles L. Harrison, Sr.
Sept 15, 2010

Nicola Lee, MD
Sept 15, 2010

Edward Ridley
Sept 13, 2010

Karol Beeson
Sept 13, 2010

Daniel Bullock
Oct 6, 2010

Corporal Jeff Ramsey
Oct 6, 2010

Jeffrey Plouch
Aug 25, 2010

B. IMSCO New Hire Training Schedule

C. Medical Records - James Ray Crews

Georgia Clinic 3 Corporate Square Atlanta, Georgia 2/2000 – 2/2009

Medical Examination Report, Concentra Medical Centers Hapeville Georgia 4/29/2008

Arkansas Children's Hospital Burn Center Records post-accident

D. Articles:

Strohl KP, Bonnie RJ, Findley L, Fletcher EG, Getsy J, Kryger MH, Millman RP et al. *Sleep apnea, sleepiness, and driving risk.* Am J Respir Crit Care Med 1994; 150: 1463-1473

Stoohs RA, Guilleminault C, Itoi A, Dement WC. *Traffic accidents in commercial long-haul truck drivers: the influence of sleep-disordered breathing and obesity.* Sleep 1994; 17: 619-623

Pack AI; Pack AM; E Rodgman; et al. *Characteristics of crashes attributed to the driver having fallen asleep.* Accid. Anal. and Prev., 1995; 27: 769-775

Stoohs, RA, Bingham L, Itoi A et al. *Sleep and sleep-disordered breathing in commercial long-haul drivers.* 1995: 107:1275-1282

Laberge-Nadeau C, Dionne G, Ekoe J-M, et al.*Impact of diabetes on crash risks of truck-permit holders and commercial drivers.* Diabetes Care 2000; 23:612-617

Howard ME, Denai AV, Grunstein RB et al. *Sleepiness, sleep-disordered breathing and accident risk factors in commercial vehicle drivers.* Am J Respir Crit Care Med 2004; 170:1014-1021

Taylor AH, Dorn L. *Stress, fatigue, health, and risk of road traffic accident among professional drivers: The contribution of physical inactivity.* Annu. Rev. Public Heath 2006: 27:2.1-2.21

Hartenbaum N, Collop N, Rosen IM et al. *Sleep apnea and commercial motor vehicle operators: Statement from the Joint Task Force of the American College of Chest Physicians , American College of Occupational and Environmental Medicine and the National Sleep Foundation* Chest 2006; 130:902-905

Hartenbaum N, Collop N, Rosen IM et al. *Sleep apnea and commercial motor vehicle operators: Statement from the Joint Task Force of the American College of Chest Physicians , American College of Occupational and Environmental Medicine and the National Sleep Foundation.* JOEM; 2006, 48(number 9 Supplement): S4-S37

Phillips B. *Truckers with OSA, should they be driving? (editorial)*
JOEM 2006; 48:281-282

Ancoli-Israel S; Cziesler C, George CFP, et al. *Expert Panel Recommendation: Obstructive Sleep Apnea and Commercial Motor Vehicle Driver Safety*
Presented to Federal Motor Carrier Safety Administration. January 14th 2008

Foster G, Sanders M, Millman R et al. *Obstructive sleep apnea among obese patients with Type 2 diabetes.* Diabetes Care 2009; 32:1017-1019

Wiegand DM, Hanowski RjJ McDonald SE. *Commercial Motor Vehicle Health and Fatigue Study (Final Report).* The National Surface Transportation Safety Center for Excellence. Feb 11, 2009

Wiegand DM; Hanowski RJ; McDonald SE. *Commercial drivers' health: A naturalistic study of body mass index, fatigue, and involvement in safety-critical events.* Traffic Injury Prevention. 2009:10:573-579

Richard P Millman MD Expert Witness Testimony

Good Samaritan Hospital v. William Roe MD
Deposition 10/12/06
Trial 2/19/08

Edward R. Alexander, Administrator of the Estate of Brian Alexander v. Denise McGrath APRN et al
Deposition 3/7/07

Donna Brown and the Estate of Duane Brown v. Thomas Rajan MD and Thomas Kandra MD
Deposition 6/25/08
Trial 10/22/08

Mark Gingrich and Esther Edwards v Washington Hospital
Deposition 9/29/08

Estate of Ann Miller v Mercy Restorative Care Hospital et al
Deposition 10/1/08

Estate of Thaddeus Krosnowski v Stephen Ward MD et al
Trial 7/1/09

Robert Doty v Union Memorial Hospital et al
Deposition 1/18/10

Carol Ann Kowalski v Bloomsburg hospital et al
Trial 3/22/10

Maria Costales v University of Washington Medical Center et al
Deposition 5/14/10
Trial 9/10/10

Howard Unger v Sinai Hospital of Baltimore et al
Deposition 7/26/10

Carluzzo v. Goldstein et al
Trial 10/18/10

February 2010

Richard P. Millman MD
Legal Consulting Fee Schedule

Hourly Rate $400

Retainer Fee $1200 (3 Hours)

Deposition Rate $400 per hour; minimum 4 hours

Trial Rate $400 per hour: minimum 10 hours per day for out of state trials

October 15, 2010

CURRICULUM VITAE
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EDUCATION

Undergraduate	Yale University, B.S. (Molecular Biophysics and Biochemistry)	1968-1972
Medical School	University of Pennsylvania, M.D.	1972-1976

POSTGRADUATE TRAINING

Residency	University of Michigan, Ann Arbor, MI Internship and Residency in Internal Medicine	1976-1979
Fellowship	University of Pennsylvania, Philadelphia, PA Fellowship in Pulmonary Medicine	1979-1981

POSTGRADUATE HONORS AND AWARDS

Phi Beta Kappa	1971
Magna cum laude, Yale University	1972
Outstanding Clinical Instructor Award, Cardiovascular Pulmonary Division, Hospital of the University of Pennsylvania	1985
Fellow, American College of Chest Physicians	1986
Sigma Xi	1988
Fellow, American Academy of Sleep Medicine	1989
Master of Arts ad eundem, Brown University	1990
Castle Connolly America's Top Doctors	2003-
Best Doctors in America	2005-

PROFESSIONAL LICENSES & BOARD CERTIFICATION

Rhode Island (#6675).	1985
Diplomate, American Board of Internal Medicine	1979
Diplomate, ABIM - Pulmonary Diseases	1982
Diplomate, American Board of Sleep Medicine	1989
Diplomate, ABIM – Sleep Medicine	2009

ACADEMIC APPOINTMENTS

University of Pennsylvania School of Medicine, Philadelphia, PA	
Research Associate in Medicine	1981-1982
Assistant Professor of Medicine	1982-1985
Alpert Medical School of Brown University, Providence, RI	
Assistant Professor of Medicine	1985-1989
Associate Professor of Medicine	1989-1996
Professor of Medicine	1996-
Vice Chairman of Medicine for Operations	2008-

HOSPITAL APPOINTMENTS

Hospital of the University of Pennsylvania, Philadelphia, PA	
Attending Physician, Department of Emergency Medicine,	1980-1985
Attending Physician, Department of Medicine	1981-1985
Director, Sleep Apnea Laboratory	1981-1985
Associate Director/Medical Affairs, Pulmonary Diagnostic Services	1982-1985
Rhode Island Hospital, Providence, RI	
Assistant Physician in Medicine	1985-1987
Associate Physician in Medicine	1988-1991
Physician in Medicine	1992-
Director, Pulmonary Function Laboratory	1985-
Director, Sleep Apnea Laboratory	1985-1990
Director, Sleep Disorders Center	1990-
Miriam Hospital, Providence, RI (Courtesy Staff)	1998-
Director, Sleep Disorders Center	1998-
Women and Infants Hospital, Providence, RI	
Consulting Physician	1986-
Member of the Corporation	1992-1994
Newport Hospital, Newport, RI (Consulting Staff)	1997-
Director, Sleep Disorders Center	1997-
Bradley Hospital, East Providence, RI (Consulting Staff)	1988-2007
St. Luke's Hospital, New Bedford, MA (Courtesy Staff)	1994-1998
VA Medical Center, Providence, RI	
Consulting Physician,	1986-1990
Westerly Hospital, Westerly, RI (Active Staff)	2003

OTHER APPOINTMENTS

American Board of Sleep Medicine	
Part I Examination Committee	1993-1998
National Sleep Foundation	
Board of Directors (Chair, Cardiopulmonary Council)	1993-1995
Adolescent Sleep and School Start Time Task Force	2005
National Institute of Health	
NHLBI National Center on Sleep Disorders Research	
Working Group on Sleep Apnea Education for Primary Care Physicians	1995
Advisory Board Member	1997-2001
Education Subcommittee	1995-1997
American Sleep Disorders Association Participant	1995-1997
Chairman	1997-2001
Co-chair, Working Group on Sleepiness in Adolescents and Young Adults	2001-2004
National Center for Research Resource, Clinical Research Center	
Site Reviewer	1985, 2003-2004
American Sleep Apnea Association Advisory Committee	1995-2001
Accreditation Council for Graduate Medical Education	
Residency Review Committee for Internal Medicine	
Pre-reviewer, Subspecialty Programs	1997-1998
Sleep Medicine Education and Research Foundation	
Board of Directors	1999-2000

HOSPITAL/FOUNDATION COMMITTEES

Hospital of the University of Pennsylvania	
Carbon Monoxide Task Force	1985
Rhode Island Hospital	
Roger Williams College/Rhode Island Hospital	
Respiratory Therapy Program Advisory Committee	1985-1987
Committee on Protection of Human Subjects	1986-1992
Chairman	1989-1992
MICU/CCU Quality Assurance Committee	1986-1987
Smoking Policy Committee	1990-1992
Research Steering Committee	1991-1992
Research Task Force	1992
Physician Marketing Committee	1992-1993
Employee Health Plan Advisory Committee	1992-1994
Taking Charge Initiative, Volume Team	1993-1994
Surgical Case Procedure Review Committee	1990-1994
Research Advisory Committee	1994-1995

Board of Directors, Physician Hospital Organization	1994-1995
IPA, Board Member	1999-2001
Malpractice Physician Advisory Group	1991-2000

Lifespan Health Care System

Lifespan Medical Staff Task Force	1994-1995
Lifespan Physician Service Organization Planning Committee	1995
Lifespan Contracting Committee	1995
Lifespan Physician Service Organization Study Group	1996
Lifespan Network Development Council	1996-1997
Director, Sleep Disorders Center of Lifespan Hospitals	1997-
Medical Advisor, Lifespan Home Medical	2004-
Meaningful Use Committee	2010-

University Medicine Foundation

Board of Directors	1991-2000
Chair, Fringe Benefits Committee	1989-2004
Compliance Oversight Committee	1998-2004
Finance Committee	2002-2006
Chair, Billing and Collection Task Force	2000-2006
Contracts Committee	2000-
Chair, Human Resources Committee	2004-
Investment Committee	2006-
Treasurer	2005-
Compliance Officer	2007-
Chief Physician for Clinical Operations	2007-

UNIVERSITY COMMITTEES

University of Pennsylvania

School of Medicine Interviewer, Admissions Committee	1983-1985
Alumni Secondary School Committee Network	2009-

Alpert Medical School of Brown University

Internship Selection Committee, Department of Medicine	1985-
Coordinator, Pulmonary Division Research Conference	1986-1987
Program Director, Sleep Fellowship	2007-

MEMBERSHIP IN SOCIETIES

American Thoracic Society

Assembly on Clinical Problems--Chairman, Nominating Committee	1990-1991
Assembly on Respiratory Neurobiology and Sleep	
Committee on Behavioral Morbidity and Sleep Apnea	1992-1994
Program Committee	1994
Nominating Committee	1998
Audit and Finance Committee	2003-2005

American College of Chest Physicians

Clinical Competence Review Committee	1988

Committee on Cardiopulmonary Sleep Disorders	1992-1994
Section on Cardiopulmonary Sleep Disorders, Steering Committee	1994-1998
Marketing Committee	2005-2007

American Academy of Sleep Medicine

Medical School Curriculum Task Force	1988
Standards of Practice Committee	1992-1995
Task Force for Assessment of Unattended Monitoring	1992-1993
Accreditation Committee, Portable Recording Task Force	1995
Education Committee, Chairman	1995-2000
Continuing Medical Education Committee	1996-2000
Central Advisory Task Force, Sleep-Disordered Breathing Section	2005-2006

Northeastern Sleep Society (Co-Founder)

Rhode Island Thoracic Society

Vice President	1989-1991
President	1991-1993

ORIGINAL PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. Millman RP, Ernst CS Atkinson BF, et al. Endobronchial metastases from clear-cell carcinoma of the vagina. Obstet Gynecol 1981; 58:259-261

2. Swartz RD, Millman RP, Billi JE et al. Epidemic methanol poisoning: Clinical and biochemical analysis of a recent episode. Medicine 1981; 60:373-382

3. Millman RP, Silage DA, Peterson DD, Pack AI. Effect of aerosolized histamine on occlusion pressure and ventilation in man. J Appl Physiol 1982; 53:690-697

4. Millman RP, Bevilacqua J, Peterson DD, Pack AI. Central sleep apnea in hypothyroidism. Am Rev Respir Dis 1983; 127:504-507

5. Kelley MA, Laufe MD, Millman RP, Peterson DD. Ventilatory responses to hypercapnia before and after athletic training. Resp Physiol 1984; 55:393-400

6. Brischetto MJ, Millman RP, Peterson DD, Silage DA, Pack AI. Effects of aging on ventilatory response to exercise and CO_2. J Appl Physiol 1984; 56:1143-1150

7. Shore ET, Millman RP. Abnormalities in the flow-volume loop in obstructive sleep apnea in the sitting and supine posture. Thorax 1984; 39:775-779

8. Millman RP, Kimmel PL, Shore ET, Wasserstein AG. Sleep apnea in hemodialysis patients: The lack of testosterone effect on its pathogenesis. Nephron 1985; 40:407-410

9. Kimmelman CP, Levine SB, Shore ET, Millman RP. Uvulopalatopharyngoplasty: A comparison of two techniques. Laryngoscope 1985; 95:1488-1490

10. Shore ET, Millman RP, Silage DA, et al. Ventilatory and arousal patterns during sleep in normal young and elderly subjects. J Appl Physiol 1985; 59:1607-1615

11. Millman RP, Chung DC, Shore ET. The importance of breath size in calibrating the respiratory inductive plethysmograph. Chest 1986; 89:840-845

12. Pack AI, Millman RP. Changes in control of ventilation, awake and asleep, in the elderly. J Am Geriatr Soc 1986; 34:533-544

13. Metzger LF, Stauffer WB, Krupinski AV, Millman RP et al. Detecting errors in blood gas measurement by analysis with two instruments. Clin Chem 1987; 33:512-517

14. Knight H, Millman RP, Pack AI et al. Clinical significance of sleep apnea in the elderly. Am Rev Respir Dis 1987; 136:845-850

15. Braman SS, Dunn SM, Amico CA, Millman RP. Complications of intrahospital transport in critically ill patients. Ann Int Med 1987; 107:469-473

16. Pack AI, Silage DA, Millman RP et al. Spectral analysis of ventilation in elderly subjects awake and asleep. J Appl Physiol 1988; 64:1257-1267

17. Millman RP, Kipp GJ, Beadles C, Braman SS. A home monitoring system for nasal CPAP. Chest 1988; 93:730-733

18. Millman RP, Knight H, Kline LR et al. Changes in compartmental ventilation in association with eye movements during sleep. J Appl Physiol 1988; 65:1196-1202

19. Saul S, Kimmelman CP, Brooks JS, LiVolsi VA, Millman RP. Histopathology of sleep apnea. Trans Amer Laryngol Assoc 1988; 109:222-225

20. Randall CS, Braman SS, Millman RP. Rapid development of cor pulmonale following acute tonsillitis in adults. Chest 1989; 95:462-463

21. Strumpf DA, Harrop P, Dobbin J, Millman RP. Massive epistaxis from nasal CPAP therapy. Chest 1989; 95:1141

22. Millman RP, Fogel BS, McNamara ME, Carlisle CC. Depression as a manifestation of obstructive sleep apnea: Reversal with nasal CPAP. J Clin Psych 1989 ; 50:348-351

23. Littell NT, Carlisle CC, Millman RP, Braman SS. Changes in airway resistance following nasal provocation. Am Rev Respir Dis 1990; 141:580-583

24. Strumpf DA, Carlisle CC, Beadles SC, Millman RP. Alternative methods of humidification during use of nasal CPAP. Respir Care 1990; 35:217-221

25. Strumpf DA, Carlisle CC, Millman RP et al. An evaluation of the Respironics BiPAP bi-level CPAP device for delivery of assisted ventilation. Respir Care 1990; 35:415-422

26. El Bayadi S, Millman RP, Tishler PV et al. A family study of sleep apnea: Anatomic and physiologic interactions. Chest 1990; 98:554-559

27. Millman RP, Kipp GJ, Carskadon MA. Sleepwalking precipitated by treatment of sleep apnea with nasal CPAP. Chest 1991; 99:750-751

28. Millman RP, Redline S, Carlisle CC et al. Daytime hypertension in obstructive sleep apnea: Prevalence and contributing risk factors. Chest 1991; 99:861-866

29. Edlund MJ, McNamara ME, Millman RP. Sleep apnea and panic attacks. Comp Psych 1991; 32:130-132

30. Redline S, Tosteson T, Boucher MA, Millman RP. Measurement of sleep-related breathing disturbances in epidemiologic studies: assessment of the validity and reproducibility of a portable monitoring device. Chest 1991; 100:1281-1286

31. O'Leary MJ, Millman RP. Technical modifications of uvulopalatopharyngoplasty: The role of the palatopharyngeus. Laryngoscope 1991; 101:1332-1335

32. Strumpf DA, Millman RP, Carlisle CC et al. Nocturnal positive pressure ventilation via nasal mask in patients with severe chronic obstructive pulmonary disease. Am Rev Respir Dis 1992; 144:1234-1239

33. Redline S, Tosteson T, Tishler PV, Carskadon MA, Millman RP. Studies in the genetics of obstructive sleep apnea. I. Familial aggregation of symptoms associated with sleep-related breathing disturbances. Am Rev Respir Dis 1992; 145:440-444

34. McNamara ME, Millman RP, Epstein MH, Fogel BS. Association of normal pressure hydrocephalus with obstructive sleep apnea. Report of a case and review of the literature. J Geriatr Psychiatry Neurol 1992; 5:238-240

35. Hill NS, Redline S, Carskadon MA, Curran FJ, Millman RP. Sleep-disordered breathing in patients with Duchenne Muscular Dystrophy using negative pressure ventilators. Chest 1992; 102:1656-1662

36. Meyer T, Eveloff SE, Kline L, Millman RP. One negative polysomnography does not exclude obstructive sleep apnea. Chest 1993; 103:756-60

37. Levinson PD, McGarvey ST, Carlisle CC, Eveloff SE, Hebert PN, Millman RP. Adiposity and cardiovascular risk factors in men with obstructive sleep apnea. Chest 1993; 103:1336-42

38. Eveloff SE, Millman RP. Sleep-related eating disorder as a cause of obstructive sleep apnea. Chest 1993; 104:629-30

39. Carskadon MA, Pueschel SM, Millman RP. Sleep-disordered breathing and behavior in three risk groups: preliminary findings from parental reports. Child's Nerv Syst 1993; 9:452-57

40. Meyer TJ, Eveloff SE, Bauer MS, Schwartz WA, Hill NS, Millman RP. Adverse environmental conditions in the respiratory and medical care unit settings. Chest 1994; 105:1211-1216

41. Eveloff SE, Rosenberg CL, Carlisle CC, Millman RP. Efficacy of a Herbst mandibular advancement device in OSA. Amer J Respir Crit Care Med 1994; 149:905-909

42. Millman RP, Carlisle CC, McGarvey ST et al. Body fat distribution and sleep apnea severity in women. Chest 1995; 107: 362-366

43. Acebo C, Millman RP et al. Sleep, breathing, and cephalometrics in older children and young adults: Part I - Normative values. Chest 1996; 109: 664-672

44. Millman RP, Acebo C et al. Sleep, breathing, and cephalometrics in older children and young adults: Part II - Response to nasal occlusion. Chest 1996; 109: 673-679

45. Aaron JN, Carlisle CC, Carskadon MA, Meyer TJ, Hill NS, Millman RP. Environmental noise as a cause of sleep disruption in an intermediate respiratory care unit. Sleep 1996; 19: 707-710

46. Carskadon MA, Bearpark HM, Sharkey KM, Millman RP et al. Effects of menopause and nasal occlusion on breathing during sleep. Amer J Respir Crit Care Med 1997; 155: 205-210

47. Meyer TJ, Pressman MR, Benditt J, McCool FD, Millman RP et al. Air leaking through the mouth during nocturnal nasal ventilation: Effect on sleep quality. Sleep 1997; 20: 561-569

48. Kramer NR, Fine MD, McRae RG, Millman RP. An unusual complication of nasal CPAP: Subcutaneous emphysema following facial trauma. Sleep 1997; 20: 895-897

49. Millman RP, Rosenberg CL, Carlisle CC et al. The efficacy of oral appliances in the treatment of persistent sleep apnea after uvulopalatopharyngoplasty surgery. Chest 1998; 113: 992-996

50. Kramer NR, Bonitati AE, Millman RP. Enuresis and obstructive sleep apnea in adults. Chest 1998; 114: 634-637

51. Kahn DM, Cook TE, Carlisle CC, Nelson DL, Kramer NR, Millman RP. Identification and modification of environmental noise in an ICU setting. Chest 1998; 114: 535-540

52. Rosen R, Mahowald M, Chesson A, Doghramji K, Goldberg R, Moline M, Millman RP et al. The Taskforce 2000 survey on medical education in sleep and sleep disorders. Sleep 1998; 21: 235-238

53. Emmons K, Cargill B, Hecht J, Goldstein M, Millman RP et al. Characteristics of patients adhering to a hospital's no-smoking policy. Prev Med 1998; 27:846-853

54. Owens JA, Millman RP, Spirito A. Sleep terrors in a five-year old girl. Arch Ped Adol Med 1999; 153:309-322

55. Kramer NR, Cook TE, Carlisle CC, Corwin RW, Millman RP. The role of the primary care physician in recognizing obstructive sleep apnea. Arch Int Med 1999; 159:965-968

56. McCormick JP, Abbott GF, Millman RP. Roentgenogram of the Month. A 77 year old man with worsening shortness of breath. Chest 1999; 115:1444-1446

57. Millman RP, Carlisle C, Rosenberg C, et al. Simple predictors of uvulopalatopharyngoplasty (UPPP) outcome in the treatment of obstructive sleep apnea. Chest 2000; 118:1025-1030

58. Emmons KM, Goldstein MG, Roberts M, Cargill B, Sherman CB, Millman RP, et al. The use of nicotine replacement therapy during hospitalization. Ann Behavioral Med 2000; 22:325-329

59. Sharkey KM, Bearpark HM, Acebo C, Millman RP, et al. Effects of menopausal status on sleep in mid-life women. Behavioral Sleep Medicine 2003; 1:69-80

60. Liesching TN, Carlisle C, Marte A, Bonitati A, Millman RP. Evaluation of the accuracy of SNAP® technology sleep sonography in detecting obstructive sleep apnea in adults compared to standard polysomnography. CHEST 2004; 125:886-891

61. Aloia MS, Arnedt JT, Smith L, Skrekas J, Stanchina M, Millman RP. Examining the construct of depression in obstructive sleep apnea syndrome. Sleep Medicine 2005; 6:115-21

62. Aloia MS, Stanchina M, Arnedt JT, Malhotra A, Millman RP. Treatment adherence and outcomes in flexible versus standard continuous positive airway pressure therapy. CHEST 2005; 127: 2085-2093

63. Stanchina ML, Abu-Hiljeh M, Chaudhry BK, Carlisle CC, Millman RP. The influence of white noise on sleep in subjects exposed to ICU noise. Sleep Medicine 2005; 6: 423-428

64. Zimmerman ME; Arnedt JT, Stanchina M, Millman RP, Aloia MS. Normalization of memory performance and PAP adherence in memory-impaired patients with obstructive sleep apnea. CHEST 2006; 130:1771-1778

65. Aloia MS, Arnedt JT, Stanchina M, Millman RP. Early establishment of adherence to PAP in obstructive sleep apnea: Revisiting night-to-night variability. Behav Sleep Med 2007; 5:229-240

66. Stanchina ML, Ellison K, Malhotra A, Anderson M, Kirk M, Benser ME, Tosi C, Carlisle C, Millman RP, Buxton A. The impact of cardiac resynchronization therapy on obstructive sleep apnea in heart failure patients. CHEST 2007; 132:433-439

67. Felver-Gant JJ, Bruce AM, Zimmerman M, Sweet LH, Millman RP, Aloia MS. Working memory in obstructive sleep apnea: construct validity and treatment effects. J Clin Sleep Med 2007; 3:589-594

68. Aloia MS, Smith K, Arnedt JT, Millman R et al. Brief behavioral therapies reduce early PAP discontinuation rates in SAS: Preliminary findings. Behav Sleep Med 2007; 5:89-104

69. Friedmann PD, Rose JS, Swift R, Stout RL, Millman RP, Stein MD. Trazodone for sleep disturbance after alcohol detoxification: A double-blind, placebo-controlled trial. Alcohol Clin Exp Res 2008; 32:1652-1660

70. Aloia MS, Goodwin MS, Velicer WF, Arnedt JT, Zimmerman M, Millman RP. Time series analysis of treatment adherence patterns in individuals with obstructive sleep apnea. Ann Behavioral Med 2008; 36:44-53

71. Sharkey KM, Kurth ME, Corso RP, Brower KJ, Millman RP, Stein MD. Home polysomnography in methadone maintenance patients with subjective sleep complaints. The American Journal of Drug and Alcohol Abuse 2009; 35:178-182

72. Foster G, Sanders M, Millman R et al. Obstructive sleep apnea among obese patients with Type 2 diabetes. Diabetes Care 2009; 32:1017-1019

73. Kurth ME, Sharkey KM, Corso RP, Millman RP, Stein MD. Insomnia among methadone-maintained persons: The feasibility of collecting home PSG recordings. J Addictive Diseases 2009; 28:219-225

74. Foster GD, Borradaile KE, Sanders MH, Millman R et al. A randomized study on the effect of weight loss on obstructive sleep apnea among obese patients with Type 2 diabetes. Arch Intern Med 2009; 169:1619-1626

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76. Sharkey KM, Machan JT, Tosi C, Roye GD, Harrington D, Millman RP. Obstructive sleep apnea in women planning bariatric surgery. J Women's Health 2010; 19:1-9

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2. Weaver TE, Millman RP. Broken sleep. Am J Nursing 1986; 86:146-150

3. Millman RP. Did the fat boy snore? Chest 1986; 89:621 (editorial).

4. Millman RP. Snoring and apnea. Clin Chest Med 1987; 8:253-264

5. Millman RP. The nose and sleep apnea. Am J Rhinology 1988; 2:83-4 (editorial).

6. Medical School Curriculum Task Force, Association of Professional Sleep Societies. The medical school curriculum consensus workshop: consensus document. Sleep 1988; 11:566-570

7. Millman RP. Sleep apnea and nasal patency. Am J Rhinology 1988; 2:177-182

8. Millman RP. Medroxyprogesterone and obstructive sleep apnea. Chest 1989; 96:225-226 (editorial).

9. Strumpf DA, Millman RP, Hill NS. The management of chronic hypoventilation. Chest 1990; 98:474-480

10. Levinson PD, Millman RP. Causes and consequences of blood pressure alterations in obstructive sleep apnea. Arch Int Med 1991; 151:455-462

11. Millman RP, Meyer TJ, Eveloff SE. Sleep apnea in the morbidly obese. Rhode Island Medicine 1992; 75:483-486

12. Millman RP. Treatment of nocturnal asthma. Allergy Proc 1993; 14:9-12

13. Standards of Practice Committee of the American Sleep Disorders Association. Practice parameters for the use of stimulants in the treatment of narcolepsy. Sleep 1994; 17: 348-51

14. Standards of Practice Committee of the American Sleep Disorders Association. Portable recordings in the assessment of obstructive sleep apnea. Sleep 1994; 17: 372-77

15. Ferber A, Millman RP, et al. Portable recording in the assessment of obstructive sleep apnea. Sleep 1994; 17: 378-92

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17. Standards of Practice Committee of the American Sleep Disorders Association. Practice parameters for the use of laser-assisted uvulopalatoplasty. Sleep 1994; 17: 744-48

18. Standards of Practice Committee of the American Sleep Disorders Association. Practice parameters for the use of polysomnography in the evaluation of insomnia. Sleep 1995; 18: 55-57

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21. Millman RP, Rosenberg C. A dental and medical approach to sleep apnea. I: An overview of sleep apnea. R I Dental J 1995; 28: 5-7

22. National Center on Sleep Disorders Research. Sleep apnea: Is your patient at risk? NIH Publication 1995; No 95-3803

23. American Thoracic Society. Standards for the diagnosis and care of patients with COPD. Am J Respir Crit Care Med 1995; 152: S77-S120

24. Rosenberg C, Millman RP. A dental and medical approach to sleep apnea. II: Treatment with dental appliances. R I Dental J 1996; 29: 5-8

25. Standards of Practice Committee of the American Sleep Disorders Association. Practice parameter guidelines for the treatment of obstructive sleep apnea in adults: The efficacy of surgical modifications of the upper airway. Sleep 1996; 19; 152-155

26. Kramer NR, Hill NS, Millman RP. Assessment and treatment of sleep pathology in neuromuscular disease. Clin Pulm Med 1996; 3: 336-343

27. Millman RP, Kramer NR. Sleep disorders and outpatient treatment of patients with pulmonary disease. Current Opinion in Pulmonary Medicine 1996; 2: 507-512

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29. Millman RP, Rosenberg C, Kramer NR. Oral appliances in the treatment of snoring and obstructive sleep apnea. Clin Chest Med 1998; 19:69-75

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31. Millman RP , Neumeyer DA, Kramer NR. Diagnostic strategies. Sem Respir Crit Care Med 1998; 19:133-138

32. Millman RP, Rosenberg C, Kramer NR. Oral appliances in the treatment of snoring and obstructive sleep apnea. Otolaryngol Clin North Am 1998; 31:1039-1048

33. Millman RP. Full polysomnography in the home: Has it come of age? (Editorial) Chest 1999; 115:6-7

34. Millman RP. Do you ever take a sleep history? Ann Int Med (Editorial) 1999; 131:535-536

35. Millman RP, Rosenberg CL. Are oral appliances a substitute for nasal positive airway pressure? (Editorial) Thorax 2002; 57:283-284

36. Millman RP (Editor) Sleep Disorders. Medicine & Health/Rhode Island 2002; 85: 81-100

37. Kimble B, Bonitati A. Millman R. A review of the adult primary sleep parasomnias. Medicine & Health/Rhode Island 2002; 85: 95-98

38. Millman RP. Pharmacological therapy of insomnia. Medicine & Health/Rhode Island 2002; 85: 99-100

39. Stanchina M, Millman RP. Sleep Medicine in Pulmonary Medicine and Critical Care MKSAP 13, American College of Physicians, 2004

40. Millman, RP, The Working Group on Sleepiness in Adolescents/Young Adults and AAP Committee on Adolescence. Excessive sleepiness in adolescents and young adults: causes, consequences and treatment strategies. Pediatrics 2005; 115:1774-1786

41. Friedman JH, Millman RP Sleep disturbances in Parkinson's Disease. CNS Spectrums 2008; 13:3 (Suppl 4) 12-17

BOOKS AND BOOK CHAPTERS

1. Kelley MA, Millman RP. An annotated bibliography. In: Pulmonary Diseases and Disorders - Update. A.P. Fishman, ed. New York, McGraw-Hill, 1982.

2. Pack AI, Millman RP, Silage DA, et al. Oscillatory changes in ventilation, awake and asleep. In: Concepts and Formulizations in the Control of Breathing. G. Benchetrit, P. Baconnier, J. Demongeot (eds), Manchester, Manchester Univ. Press, 1987.

3. Millman RP, Fishman AP. Disorders of alveolar ventilation. In: Pulmonary Diseases and Disorders, Second Edition. A.P. Fishman, ed. New York, McGraw-Hill, 1988.

4. Millman RP, Fishman AP. Sleep apnea syndromes. In: Pulmonary Diseases and Disorders, Second Edition, A.P. Fishman, ed. New York, McGraw-Hill, 1988.

5. Pack AI, Millman RP. Lungs in later life. In: Pulmonary Diseases and Disorders, Second Edition. A.P. Fishman, ed. New York, McGraw-Hill, 1988.

6. Millman RP. Investigative and diagnostic approaches in immunologic diseases. Bronchial inhalation challenge testing. In: Immunology and Immunologic Diseases of the Lungs. R.P. Daniele, ed. Boston, Blackwell Scientific Publications, 1988.

7. Millman RP. Sleep apnea and nasal patency. In: Rhinitis, 2nd Edition, G.A. Settipane, ed. Providence, Ocean Side Publications, 1991.

8. Millman RP, Carlisle CC, McGarvey S, Eveloff SE, Levinson PD. The effect of aging on hypertension and cardiac risk in sleep apnea. In: Sleep and Respiration in Aging Adults, Kuna ST, Remmers JE, Suratt PM (eds), New York, Elsevier, 1991.

9. Millman RP, Braman SS. Transporting critically ill patients In: Principles and Practice of Medical Intensive Care. R Carlson, M Gaheb (eds), Philadelphia, Saunders, 1993.

10. Westbrook PR, Millman RP. Controversies in the treatment of snoring and obstructive sleep apnea In: Sleep and breathing, 2nd Edition. NA Saunders, CE Sullivan (eds), New York, Marcel Dekker, 1993.

11. Millman RP. Tonsillitis In: Encyclopedia of Sleep and Dreaming, New York, Macmillan 1993.

12. Eveloff SE, Millman RP. Sudden death in Asian populations. Encyclopedia of Sleep and Dreaming, New York, Macmillan 1993.

13. Levinson PD, Millman RP. Sleep apnea: Management. In: Hypertension Primer. JL Izzo Jr, HR Black (eds), American Heart Association, 1993.

14. Millman RP . Sleep assessment in pulmonary rehabilitation. In Pulmonary Rehabilitation. AP Fishman (ed), New York, Marcel Dekker 231-249, 1996.

15. Neumeyer DA, Kramer NR, Millman RP. Sleep disorders. In Prognosis in Neurology. JM Gilchrist (ed). Newton, MA, Butterworth Heinemann 11-16, 1998.

16. Kahn DM, Levinson P Millman RP. Obstructive sleep apnea and hypertension. In Hypertension. Oparil S, Weber M (eds) Philadelphia, W.B.Saunders 657-662, 1999.

17. Levinson PD, Millman RP. Management of sleep apnea In: Hypertension Primer. Second Edition. JL Izzo Jr, HR Black (eds), Baltimore, Lippincott, Williams & Wilkins, 1999.

18. Millman, RP Sleep problems and the use of hypnotics. In: Practical Guide to Care of the Psychiatric Patient, Third Edition. Goldberg R (ed) 195-209, 2007

OTHER NON-PEER REVIEWED PUBLICATIONS

1. Millman RP, Cohen TB, Levinson AJ et al. Systemic lupus erythematosus complicated by acute pulmonary hemorrhage: recovery following plasmapheresis and cytotoxic therapy. J Rheum 1981; 8:1021-1023 (letter).

2. Shore ET, Millman RP. Central sleep apnea and acetazolamide therapy. Arch Int Med 1983; 143:1278 (letter).

3. Millman RP. Portable recordings in the diagnosis of obstructive sleep apnea. RT, The Journal for Respiratory Care Practitioners 1993; 6: 62-7, 1993.

4. Millman RP. Coping with insomnia: Effective drug and non-drug therapies. Women's Health in Primary Care 1998; 9:737-745

SCHOLARLY WORK PUBLISHED IN OTHER MEDIA

1. Millman RP, Kramer NR. The role of polysomnography in the diagnostic evaluation of obstructive sleep apnea. In Up-To-Date in Pulmonary and Critical Care Medicine, American Thoracic Society Educational CD-ROM Program , 1996.

2. Millman RP, Kramer NR. The role of unattended monitoring in the diagnostic evaluation of sleep apnea. In Up-To-Date in Pulmonary and Critical Care Medicine, American Thoracic Society Educational CD-ROM Program, 1996.

3. Kramer NR, Millman RP, Hill NS. Assessment of sleep disordered breathing in patients with neuromuscular and chest wall disease. In Up-To-Date in Pulmonary and Critical Care Medicine, American Thoracic Society Educational CD-ROM Program,1996.

4. American Sleep Disorders Association. Sleep Apnea: Diagnosis and Treatment (slide set). 1997.

5. Millman RP, Kramer NR. Polysomnography in obstructive sleep apnea-hypopnea in adults.. In UpToDate, Rose BD (ed) UpToDate, Waltham, MA 2008.

INVITED PARTICIPATION: REGIONAL AND NATIONAL MEETINGS; VISITING PROFESSORSHIPS

1. "Bronchial Reactivity", Pulmonary Laboratory Techniques Meeting, Philadelphia, PA, November 16-18, 1981.

2. "Bronchial Challenge Testing and the Diagnosis of Asthma". Pulmonary Medicine Update '82, Western Pennsylvania Hospital, Pittsburgh, PA, October 15, 1982.

3. Member, Course Planning Committee and Lecturer on "Sleep Apnea", "Bronchial Reactivity", and "Predicted Normal Values and Interpretation", Pulmonary Laboratory Techniques Meeting, Philadelphia, PA, November 15-17, 1982.

4. Member, Course Planning Committee and Lecturer on "Bronchoprovocation" and Sleep Apnea", Pulmonary Laboratory Techniques Meeting, Philadelphia, PA, November 14-16, 1983.

5. "Sleep Disorders in Elderly Patient", Symposium on Aging and the Lung, American Thoracic Society Annual Meeting, Anaheim, CA, May 12-15, 1985.

6. "The Effect of the Nose on Lung Function--Awake and Asleep", Meet the Professor Seminar, American Thoracic Society Annual Meeting, Kansas City, MO, May 11-14, 1986.

7. Visiting Professor, Salem Hospital, Salem, MA, February 6, 1987.

8. Co-Chairman, Northeastern Sleep Society Meeting. Chairman, Symposium on "Therapeutic Approaches to Obstructive Sleep Apnea" and Lecturer on "Medical Approaches to Obstructive Sleep Apnea", Providence, Rhode Island, March 27, 1987.

9. "Effect of the Nose on Lung Function: Awake and Asleep", National Society for Cardiopulmonary Technology Annual Meeting, Boston, MA, June 2-5, 1987.

10. "The Clinical Significance of Sleep Apnea in the Healthy Elderly Subject", Association of Professional Sleep Societies Annual Meeting, San Francisco, CA, September 11-13, 1987.

11. "Sleep Disorders", New England College Health Association Annual Meeting, Newport, RI, October 22-24, 1987.

12. Co-Chairman, Northeastern Sleep Society Meeting and Moderator, Scientific Paper Session, Providence, RI, March 11-12, 1988.

13. "Sleep Apnea and Nasal Patency", National Symposium on Nasal Function in Health and Disease, Providence, RI, April 13, 1988.

14. National Task Force on Establishing Standards for Teaching Sleep Medicine in Medical Schools, Association of Professional Sleep Societies Annual Meeting, San Diego, CA, June 11-15, 1988.

15. Visiting Professor, Albany Medical Center, Albany, NY, August 24-25, 1988.

16. "Advances in Obstructive Sleep Apnea", Annual Yankee Dental Conference, Boston, MA, January 21, 1989.

17. Chairman, Scientific Session on Sleep Apnea, Association of Professional Sleep Societies Annual Meeting, Washington, D.C. June 22-25, 1989.

18. Visiting Lecturer, Winthrop-University Hospital, Mineola, NY, October 3, 1989.

19. "Nasal CPAP", Maine Society for Respiratory Care, Portland, ME, May 11, 1990.

20. "Hypertension and Obstructive Sleep Apnea ", Meet the Professor Seminar, Association of Professional Sleep Societies Annual Meeting, Minneapolis, MN, June 27-July 1, 1990.

21. Chairman, Scientific Session on Sleep Apnea, Association of Professional Sleep Societies Annual Meeting, Minneapolis, MN, June 27-July 1, 1990.

22. Visiting Lecturer, Memorial Sloan-Kettering Cancer Center, New York, NY, September 17, 1990.

23. "Obstructive Sleep Apnea", Annual Meeting Massachusetts Society for Respiratory Care, Sturbridge, MA, October 30, 1990.

24. "The Effect of Aging on Hypertension and Cardiac Risk in Sleep Apnea", Second International Symposium on Sleep and Respiration, Houston, TX, March 9-13, 1991.

25. "Sleep Apnea and Nasal Patency", New England Society of Allergy, Sturbridge, MA, May 1, 1991.

26. "Hypertension and Sleep Apnea", Meet the Professor Seminar, Association of Professional Sleep Societies Annual Meeting, Toronto, Canada, June 16-19, 1991.

27. Chair, Scientific Session on Nasal CPAP in Sleep Apnea, Association of Professional Sleep Societies Annual Meeting, Toronto, Canada, June 16-19, 1991.

28. "Obstructive Sleep Apnea", Grand Rounds, Samaritan Hospital, Troy, NY, October 10, 1991.

29. Chairman, Program Committee, Eastern Section-American Thoracic Society Annual Meeting, Boston, MA, October 18-19, 1991.

30. "Sleep Apnea", American Association of General Hospital Psychiatrists Annual Meeting, Cambridge, MA, November 2, 1991.

31. Visiting Lecturer, Baptist Medical Center, Jacksonville, FL, March 17, 1992.

32. Visiting Professor, University of Pennsylvania Medical Center, Philadelphia, PA, March 26-27, 1992.

33. "Hypertension and Cardiac Disease and its Relationship to Sleep Apnea", Northeastern Sleep Society Meeting, Philadelphia, PA, March 28, 1992.

34. "Treatment of Nocturnal Asthma" Symposium on Mechanisms of Nocturnal Asthma: Insights to Airway Inflammation and Regulation. East Allergy Conference/Southwest Allergy Forum. New Orleans, LA April 29-May 2, 1992.

35. Course Director, "Medical, Behavioral and Surgical Treatment of Obstructive Sleep Apnea" Association of Professional Sleep Societies Annual Meeting, Phoenix, AZ, May 28-June 3, 1992

36. "Obstructive Sleep Apnea in Children and Adolescents", Problems in Pediatrics Course, Colby College, Waterville, ME, July 13-17, 1992.

37. Visiting Lecturer, National Jewish Hospital, Denver, CO, July 28, 1992.

38. "The Lung at Night: Nocturnal Asthma and Beyond", Connecticut Thoracic Society Annual Meeting, Bristol, CT, November 11, 1992.

39. Participant, American Thoracic Society Consensus Conference on Diagnosis and Management of Obstructive Sleep Apnea, New York, NY, February 25-27, 1993.

40. "Portable Sleep Apnea Monitoring--Has it Come of Age?" Rhode Island Society for Respiratory Care Annual Meeting, Newport, RI, March 10-11, 1993.

41. Course Director, "Screening and Unattended Recording in the Diagnosis of Obstructive Sleep Apnea". Association of Professional Sleep Societies Annual Meeting, Los Angeles, CA, June 22-27, 1993.

42. "Obstructive Sleep Apnea," Medical Grand Rounds, University of Massachusetts Medical Center, Worcester, MA, August 5, 1993.

43. Pro/Con Session - "The Role of Portable Recordings in the Assessment of Sleep Apnea". Joint Meeting of the Pennsylvania and New Jersey Thoracic Societies, Philadelphia, PA, September 10-11, 1993.

44. "Obstructive Sleep Apnea", Medical Grand Rounds, St. Vincent's Medical Center, Worcester, MA, October 14, 1993.

45. "Disorders of Excessive Sleepiness", St. Mary's Regional Medical Center, Lewiston, ME, October 19, 1993.

46. Visiting Professor, New England Deaconess Hospital, Boston, MA, November 29-30, 1993.

47. Chairman, Poster Discussion Session on Portable Monitoring During Sleep, American Thoracic Society Annual Meeting, Boston, MA, May 22-25, 1994.

48. "Obstructive Sleep Apnea" University of Massachusetts Advances in Respiratory Care Annual Symposium, Marlboro, MA, June 1, 1994.

49. "Is Sleep Apnea a Fatal Disease?" Meet the Professor Symposium, Association of Professional Sleep Societies Annual Meeting, Boston, MA, June 4-9, 1994.

50. Panel Discussant, "Role of In-Home Testing in Diagnosis of Sleep Disorders" Association of Professional Sleep Societies Annual Meeting, Boston, MA, June 4-9, 1994.

51. "Medical Management of Sleep Apnea," State of the Art Lecture, Fourth World Congress on Sleep Apnea, San Francisco, CA, October 1-4, 1994.

52. "Diagnosis and Management of Sleep Disorders," Psychiatry Grand Rounds, Boston University Hospital, Boston, MA, October 26, 1994.

53. "An Overview of Sleep Disorders" Eleventh Annual Psychopharmacology Symposium-1994, Fall River, MA, October 27, 1994.

54. "Recent Advances in Sleep Apnea," Medical Grand Rounds, The North Shore Medical Center, Salem, MA, October 28, 1994.

55. "Use of Portable Recordings in the Diagnosis of Obstructive Sleep Apnea," Kansas City Sleep Society, Kansas City, MO, November 17, 1994.

56. "Diagnosis and Management of Insomnia," General Internal Medicine Rounds, Boston University Hospital, Boston, MA, January 13, 1995.

57. Visiting Professor, Albany Medical College, March 22-23, 1995.

58. Discussion Facilitator, Poster Session on Epidemiology, Pathophysiology and Diagnosis of Obstructive Sleep Apnea. American Thoracic Society Annual Meeting, Seattle, WA, May 20-24, 1995.

59. Chairman, Clinical Workshop. "Controversial Issues in Palatal Surgery for Sleep Apnea." American Thoracic Society Annual Meeting, Seattle, WA, May 20-24, 1995.

60. Chairman, Oral Poster Symposium Session. "Medical and Surgical Therapy of Sleep Disordered Breathing." Association of Professional Sleep Societies Annual Meeting, Nashville TN, May 30-June 4, 1995.

61. "Diagnosis and Management of Insomnia," Psychiatry Grand Rounds, St. Elizabeth's Hospital, Brighton, MA, June 12,1995.

62. "A Primary Care Approach to Insomnia" Medical Grand Rounds, New England Baptist Hospital, Boston, MA, October 12, 1995.

63. "Upper Airway Resistance Syndrome," Inter-hospital Pulmonary Conference, University of Massachusetts Medical Center, Worcester, MA, October 18,1995.

64. "Insomnia for the Primary Care Physician" American College of Physicians Internal Medicine Update, Newport, RI, October 25, 1995.

65. Course Director, "Nuts and Bolts of Setting up a Sleep Lab," American College of Chest Physicians Annual Meeting, New York, NY, October 28-November 2, 1995.

66. "Innovative Treatments for Obstructive Sleep Apnea" Medical Grand Rounds, Lankenau Hospital, Philadelphia, PA, November 3, 1995.

67. "An Internist's Approach to Sleep Disorders" American College of Physicians Meeting Broadening the Skills of the General Care Internist, Boston, MA, November 11-14, 1995.

68. "Upper Airway Resistance Syndrome and Obstructive Sleep Apnea" Connecticut Thoracic Society Annual Meeting, Southbury, CT, November 15,1995.

69. "Sleep Disorders in the Elderly" Gerontology Grand Rounds, Beth Israel Hospital, Boston, MA, February, 1996.

70. "Is Snoring Bad for your Heart? American Heart Association 23rd Health and Science Journalists Forum, Portsmouth, NH, July 14-16, 1996.

71. "Recognition and Differential Diagnosis of Insomnia" Sleep Postgraduate Course, American Academy of Family Physicians Annual Meeting, New Orleans, LA, October 2-6,1996.

72. "An Internist's Approach to Sleep Disorders" American College of Physicians Meeting

Broadening the Skills of the General Care Internist, Boston, MA, November 9-12, 1996.

73. Member of the Organizing Committee and Lecturer, American Thoracic Society Second State-of-the-Art Review Course on Pulmonary and Critical Care Medicine, San Diego, CA February 1-4, 1997.

74. "Diagnostic Strategies" Michigan Thoracic Society Meeting - Advances in Sleep Disordered Breathing, Novi, MI, April 25, 1997.

75. Chair, Oral Paper Session on Medical Education in Sleep, Association of Professional Sleep Societies Annual Meeting, San Francisco June 11-15, 1997.

76. "Current Concepts and The Role of the Sleep Study" New England Chapter American College of Chest Physicians, Boston, MA, September 17, 1997.

77. "Insomnia- Differential Diagnosis and Treatment" Sleep Postgraduate Course, American Academy of Family Physicians Annual Meeting, Chicago IL, September 17-21, 1997.

78. "Sleep Apnea" Third Annual Advances in Pulmonary Medicine, Inova Fairfax Hospital, Falls Church, VA, October 16-17, 1997.

79. "Obstructive Sleep Apnea" Medical Grand Rounds, New England Medical Center, Boston MA November 14, 1997.

80. "Treatment Advances in Obstructive Sleep Apnea" American Thoracic Society Third State-of-the-Art Review Course on Pulmonary and Critical Care Medicine, Orlando FL, February 13-16, 1998.

81. Co-Chairman, NIH Strategy Development Workshop on Educating Youth About Sleep and Drowsy Driving., Washington DC, June 5, 1998.

82. Co-Course Director, Common Sleep Disorders in Children and Adults, Providence, RI, September 16, 1998.

83. "The Efficacy of Oral Appliances in the Treatment of Persistent Sleep Apnea After Uvulopalatopharyngoplasty" Association of Professional Sleep Societies Annual Meting, Orlando, FL, June 19-24, 1999.

84. “Obstructive Sleep Apnea” Grand Rounds, Baystate Medical Center, Springfield, MA, September 15, 1999.

85. “A Rational Approach to Insomnia” Grand Rounds, CVPH Medical Center, Plattsburgh, NY, December 10, 1999.

86.. “A Rational Approach to Insomnia” Department of Psychiatry Grand Rounds, University of Massachusetts Medical Center, Worcester, MA, March 9, 2000.

87. "Insomnia" Grand Rounds, Caritas Good Samaritan Medical Center, Brockton, MA, April 25, 2000.

88. "Pharmacotherapy of Insomnia" The Cambridge Health Alliance Advanced Psychopharmacology Seminar, Somerville, MA, May 17, 2000.

89. "Recent Advances in the Diagnosis and Treatment of Insomnia" Psychiatry Grand Rounds, Southern New Hampshire Medical Center, Nashua, NH, September 1, 2000.

90. "Recent Advances in the Diagnosis and Treatment of Insomnia" Psychiatry Grand Rounds, Dartmouth-Hitchcock Medical Center, Lebanon, NH, September 26, 2000.

91. "Treatment of Sleep Apnea in the Year 2000" New England States Chapter American College of Chest Physicians Annual Meeting, Providence, RI, September 27, 2000.

92. "A Rational Approach to Insomnia" Psychiatry Grand Rounds, Berkshire Medical Center, Pittsfield, MA, April 27, 2001.

93. "Diagnosing Sleep Apnea & Monitoring NPPV: Should it be Done in the Home?" New Vistas: Beyond Noninvasive Ventilation. Newport, RI, May 11, 2001.

94. "Laser Palatoplasty is Not Useful for Treating Sleep Disordered Breathing" Current Controversies in Sleep Medicine Symposium, American Thoracic Society Annual Meeting, San Francisco, CA, May 20, 2001.

95. "Sleepiness in Adolescents: A Deadly Combination". American Academy of Pediatrics Annual Meeting, Boston, MA, October 19-23, 2002.

96. Visiting Professor, North Shore – Long Island Jewish Health System, Manhasset, NY, March 25-26, 2003.

97. Sleep Disorders" Connecticut Academy of Physician Assistants, Charter Oak Conference, Newport, RI, April 3, 2003.

98. "Obstructive Sleep Apnea" 2nd Annual Brown Medical School Update in Internal Medicine, Warwick, RI, May 7, 2004.

99. Course Director, "Sleep and College Students: Problems and Solutions". Newport, RI, May 7-8, 2004.

100. Chair, "Non-Cardiopulmonary Outcomes of Sleep Disordered Breathing". American Thoracic Society, Orlando, FL, May 21-26, 2004.

101. "A Rational Approach to Insomnia", Department of Psychiatry Grand Rounds, Hospital of Saint Raphael, New Haven, CT. September 2, 2004

102. "Approach to the Sleepy Student" New England College Health Association Annual Meeting, Portsmouth, NH, November 3-5, 2004

103. "Sleep Disordered Breathing and Cardiovascular Health" William Figueroa Memorial Lecture, Laennec Society of Philadelphia, Philadelphia, PA, September 21, 2005

104. Visiting Professor, Sleep Symposium, Wellesley College, February 1, 2006

105. Co-chair, 20th Annual Northeast Sleep Society Meeting, Warwick, RI, March 17–18, 2006

106. "New Treatment Options for Managing Insomnia" Pri-Med Updates, Hartford, CT, April 6, 2006

107. "How Will Home Studies Replace In-lab PSGs?" Lung Summit 2006: Innovations in Pulmonary and Critical Care, Cleveland Clinic, Cleveland, OH April 20-22, 2006

108. "Advanced CPAP Devices and Auto-PAP for Improved Efficacy and Compliance" Lung Summit 2006: Innovations in Pulmonary and Critical Care, Cleveland Clinic, Cleveland, OH April 20-22, 2006

109. "Non-pulmonary Aspects of Sleep" Update in Pulmonary, Critical Care & Sleep Medicine, ACCP New England States Chapter Annual Meeting, Newport, RI September 29, 2006

110. "Adolescents are Neither Small Adults or Large Children" Sleep Across the Life Span Symposium, American College of Chest Physicians Annual Meeting, Salt Lake City, UT, October 21-26, 2006

111. "Sleep and the College Student" New England College Health Association Annual Meeting, Portland, ME November 1-3, 2006

112. Visiting Professor, Sleep Symposium, Simmons College, Boston, MA September 27, 2007

113. "A Practical Approach to Insomnia" Grand Rounds, Lankenau Hospital, Philadelphia, PA, November 14, 2008

114. "Pro/Con: Should You Treat Mild Sleep Apnea" Northeast Sleep Society 23rd Annual Conference Newton, MA, March 20-21, 2009

115. "The Sleepy Teen Driver" New England Traffic and Safety Education Association Annual Conference, Nashua, NH, October 30-31, 2009

GRANT SUPPORT

1. National Research Service Award, Department of Health and Human Services (1981-1982).

2. Co-investigator, Sleep Apnea in the Elderly project, National Institute of Aging Teaching Nursing Home Award to the University of Pennsylvania, Medical College of Pennsylvania and Philadelphia Geriatric Center (1981-1985).

3. Principal Investigator - "An Analysis of Breathing During REM Sleep in the Elderly". Grant from the Rhode Island Foundation (1987)

4. Co-investigator, "Therapy of Severe COPD with Positive Pressure Administered via a Nose Mask". Grant from Respironics, Inc. (1988-1989).

5. Co-investigator, "Sleep Apnea in Children and Adolescents", National Institutes of Health RO-1 Award HL44138-01 (1/1/90-12/31/93.

6. Principal Investigator, "Pilot Study to Evaluate the Effects of Misoprostol in Steroid-Dependent Asthmatics". Grant from Searle Pharmaceuticals (1991-1992).

7. Co-investigator, "Obstructive Sleep Apnea, Fat Distribution and Cardiovascular Risk in Obese, Middle-aged Men". Grant from the American Heart Association, Rhode Island Affiliate (1991-1992).

8. Co-principal Investigator, "The Relationship Between Sleep and Respiratory Muscle Function". Grant from the Meyer Saklad Foundation (1991-1993).

9. Principal Investigator, "Pilot Study to Test Electrical Stimulation in the Therapy of Obstructive Sleep Apnea". Grant from The EdenTec Corporation (1991).

10. Co-investigator, "Does Health Feedback Enhance Self-help Smoking Outcome", National Institutes of Health RO-1 Award (1/1/93-8/31/94

11. Co-investigator, " KIDZZ Sleep Video Project" American Sleep Disorders Association (1998)

12. Co-investigator, "A Biopsychosocial Model of Sleep Education". Sleep Academic Award from the National Institute of Health (1998-2003).

13. Co-investigator, "Restless Leg and Periodic Limb Movements in Children With Iron Deficiency Anemia and Elevated Lead". Grant from The Restless Leg Foundation (1999)

14. Principal Investigator, "A simple intervention to attenuate environmental noise in a hospital setting". Grant from the Meyer-Saklad Foundation (1999-2000)

15. Co-investigator, "Motivating Adherence to CPAP and Obstructive Sleep Apnea. National Institutes of Health RO1 HL67209-01 Subcontract to RI Hospital from Brown University (3/1/2001-2/28/2006).

16. Co-investigator “Sleep and Cognitive/Neuropsychological Function in Children with Attention-Deficit/Hyperactivity Disorder Before and During Treatment with Tomoxetin Hydrochloride and Stimulants. Grant from Lilly (Protocol B4Z-MC-LYAN) (2001-2002).

17. Co-investigator “Trazodone for Sleep Disturbance—Early Alcohol Recovery. National Institutes of Health 1 RO1 AA13243-01 (2001-2006).

18. Principal Investigator, Brown University site “Sleep Apnea in Look AHEAD Participants. National Institutes of Health 1R01HL70301-01 (2001-2006).

19. Principal Investigator “The Use of Chaotic Circuitry in Normal Subjects and Patients with Sleep Apnea”. Grant from Vanguard Technologies (2002-2003)

20. Principal Investigator, Unrestricted research grant for pulmonary sleep research from Respironics Corporation (2004-2005)

21. Co investigator, “A Phase 3, Open Label, Parallel-Group Study to Compare Two Dosing Algorithms for Preprandial Human Insulin Inhalation Powder (HIIP) in Insulin-Naïve Patients with Type 2 Diabetes Mellitus. Grant from Lilly (Protocol H7U-MC-IDAY).(2006-2007)

22. Co-investigator / Consultant, “Insomnia and Drug Relapse Risk” National Institutes of Health RFA-DA-05-004 (2005-2010).

23. Principal Investigator, Brown University site “The Effects of Weight Loss on Sleep Apnea Patients with Type II Diabetes” National Institutes of Health 2 RO1 HL070301-06 (2006-2009)

24. Coinvestigator, “Increasing Sleep Duration: A Novel Approach to Weight Control” U01 NIH Research Project Cooperative Agreement (Wing, Rena). (2009-2014)

UNIVERSITY COURSE TEACHING ROLES

University of Pennsylvania (1981-1985)

1. Interdepartmental 205 - Respiratory Pathophysiology
   1981-82 - Lecturer, small group leader
   1984-85 - Assistant course Director

2. Interdepartmental 302 - Emergency Management
   1982-83 - Lecturer

3. Medicine 100 - Introduction to Clinical Medicine
   1984 – Co-director, pulmonary block

4. Medicine 200- Internal Medicine Clerkship
   1984-85 - Attending Physician, 1 month/year

5. Medicine 300- Junior Internship in Medicine
   1984-85 - Attending Physician, 1 month/year

6. Medicine 310A - Junior Internship, Medical Intensive Care
   1981-85 - Attending Physician, 2 months/year

7. Medicine 364A - Pulmonary Medicine Elective
   1981-85 - Attending Physician, 1 month/year

Lectures were also given in Pharmacology 100 and 200

Brown University (1985-2010)

1. Biomed 209 - Special Topics in Respiratory Physiology
   1986, 1988, 1992- Lecturer

2. Biomed 281 - Respiratory Pathophysiology
   1985-1990, 1993-1999, 2008 Lecturer and/or small group leader
   1987-1990 - Course Leader

3. Biomed 301 - Core Clinical Clerkship in Medicine
   1988-89 - Attending Physician, 1 month

4. Biomed 314A - Pulmonary Diseases Elective at RI Hospital
   1985-2004 - Attending Physician, 1-3 months/year

5. Biomed 314D - Pulmonary Diseases Elective at VA Medical Center
   1986-1990 - Attending Physician, 1 month/year

6 Biomed 315B - Medical Intensive Care Elective at RI Hospital
   1985-2002- Attending Physician, 1-3 months/year

Lectures were also given in Biomed 117 and Bio 80

HOSPITAL TEACHING ROLES

1. Teaching Attending, Medical Intensive Care Unit
   Rhode Island Hospital, 1-3 months/year. 1985-2002

2. Teaching Attending, Respiratory Intensive Care Unit
   Rhode Island Hospital, 1-3 months/year. 1994-Present

3. Teaching Attending, Pulmonary Consultation Service
   Rhode Island Hospital, 1-3 months/year. 1985-2005; 2009

4. Sleep Disorders Medicine for the Pulmonary Fellow
   Course Director 1993-1996
   Lecturer 1993-2001, 2003

5. 3-hour lecture on Sleep Disorders to Primary Care Interns
   Ambulatory Block Lecture Series at Rhode Island Hospital
   1996-Present

6. 3-hour lecture on Sleep Disorders to Senior Psychiatry Residents
   Lecture Series at Butler Hospital, 1996-1999, 2003-2006

7. Faculty, Neurophysiology Fellowship 2007 – Present

8. Program Director, Sleep Fellowship 2007- Present